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Professor Kahn is the Robert Julius Thorne Professor of Political Economy, Emeritus, at Cornell University and a Special Consultant to NERA.

He has been Chairman of the New York Public Service Commission; Chairman of the Civil Aeronautics Board; and Advisor to the President (Carter) on Inflation and Chairman of the Council on Wage and Price Stability.

Professor Kahn received his Bachelor's (summa cum laude) and Master's degrees from New York University and a Doctorate in Economics from Yale University. Following service in the Army, he served as Chairman of the Department of Economics at Ripon College, Wisconsin. He moved to the Department of Economics at Cornell University, where he remained until he took leave to assume the Chairmanship of the New York Public Service Commission. During his tenure at Cornell, Professor Kahn served as Chairman of the Department of Economics, member of the Board of Trustees of the University and Dean of the College of Arts and Sciences.

Throughout his career, Professor Kahn has served on a variety of public and private boards and commissions including: the Attorney General's National Committee to Study the Antitrust Laws: the senior staff of the President's Council of Economic Advisors; the Economic Advisory Council of American Telephone & Telegraph Company; the National Academy of Sciences Advisory Review Committee on Sulfur Dioxide Emissions: the Environmental Advisory Committee of the Federal Energy Administration: the Public Advisory Board of the Electric Power Research Institute: the Board of Directors of the New York State Energy Research and Development Authority: the Executive Committee of the National Association of Regulatory Utility Commissioners: the National Commission for Review of Antitrust Laws and Procedures: the New York State Council on Fiscal and Economic Priorities; the Governor of New York's Fact-Finding Panel on Long Island Lighting Company's Nuclear Power Plant at Shoreham, L.I.; the Governor of New York's Advisory Committee on Public Power for Long Island; the National Governing Board of Common Cause; and, in 1990, as Chairman of the International Institute for Applied Systems Analysis Advisory Committee on Price Reform and Competition in the USSR.

He has also served as a court-appointed expert in State of New York v. Kraft General Foods, Inc., et al., U.S. District Court, S.D.N.Y.; Advisor to New York Governor Carey on Telecommunications Policy; and as a consultant to the Attorneys General of New York, Pennsylvania and Illinois, the Ford Foundation, the National Commission on Food Marketing, Federal Trade Commission, Antitrust Division of the Department of Justice, the U.S. Department of Agriculture and the City of Denver on charging and financing of Stapleton Airport.

He has received L.L.D. honorary degrees from Colby College, Ripon College, Northwestern University, the University of Massachusetts and Colgate University, and an honorary D.H.L. from the State University of New York, Albany; he also received the Distinguished Transportation Research Award of the Transportation Board Forum, The Alumni Achievement Award of New York University, the award of the American Economic Association's Transportation and Public Utilities Group for Outstanding Contributions to Scholarship, The Henry Edward Salzberg Honorary Award from Syracuse University for Outstanding Achievement in the Field of Transportation, and the Burton Gordon Feldman Award for Distinguished Public Service from Brandeis University; and was elected to membership in the American Academy of Arts and Sciences and Vice President of the American Economic Association. He was for 15 years a regular commentator on PBS's "The Nightly Business Report."

He has testified before many U.S. Senate and House Committees, the Federal Power Commission, the Federal Energy Regulatory Commission and numerous state regulatory bodies.

Professor Kahn's publications include Letting Go: Deregulating the Process of Deregulation; Great Britain in the World Economy; Fair Competition: The Law and Economics of Antitrust Policy (co-authored); Integration and Competition in the Petroleum Industry (co-authored); and The Economics of Regulation. He has written numerous articles which have appeared in The American Economic Review, The Quarterly Journal of Economics. The Journal of Political Economy, Harvard Law Review, Yale Journal on Regulation, Yale Law Journal, Fortune, The Antitrust Bulletin and The Economist, among others.

EDUCATION:

YALE UNIVERSITY Ph.D., Economics, 1942

UNIVERSITY OF MISSOURI Graduate Study, 1937-1938

NEW YORK UNIVERSITY M.A., Economics, 1937

A.B. (summa cum laude), Economics, 1936

EMPLOYMENT:

| EMPLOYMEN | Γ : |
|--|--|
| 1961-1974 1980- | NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC. Special Consultant |
| 1947-1989 | CORNELL UNIVERSITY Assistant Professor; Associate Professor; Robert Julius Thorne Professor of Economics; Robert Julius Thorne Professor of Political Economy, Emeritus, 1989-; Chairman, Department of Economics; Dean, College of Arts and Sciences; on leave 1974-80. |
| Spring 1989 | NEW YORK UNIVERSITY SCHOOL OF LAW Visiting Meyer Professor of Law |
| 1978-1980 1978-1980 1977-1978 1955-1957 1943 1943 1942 | UNITED STATES GOVERNMENT Advisor on Inflation to President Carter Chairman, Council on Wage and Price Stability Chairman, Civil Aeronautics Board Senior Staff, Council of Economic Advisors to the President U.S. Army, Private War Production Board Associate Economist, International Economics Unit, Bureau of Foreign and Domestic Commerce, Department of Commerce Associate Economist, Antitrust Division, U.S. Department of Justice |
| 1974-1977 | NEW YORK STATE PUBLIC SERVICE COMMISSION Chairman |
| 1940. 1950-1951 | BROOKINGS INSTITUTION Staff Economist |
| 1945-1947 | RIPON COLLEGE Assistant Professor, Chairman. Department of Economics |
| 1944-1945 | TWENTIETH CENTURY FUND Research Economist |

| COMMISSION ON PALESTINE SURVEYS Economist |
|---|
| UNIVERSITY OF MISSOURI Teaching Assistant |

CONSULTANCIES AND PROFESSIONAL ACTIVITIES:

| 1994-1995 | Antitrust Division, U.S. Department of Justice, on the application of Ameritech | |
|---------------------------------------|---|--|
| | for waivers of the interexchange restrictions in the AT&T Modified Final | |
| 1994 | Judgment | |
| | American Airlines on code-sharing | |
| 1993-1994 | Court-appointed expert in State of New York v. Kraft General Foods, Inc., et al., | |
| | U.S. District Court, S.D.N.Y. | |
| 1992 | New Zealand Telecom on the progress of competition in New Zealand | |
| | telecommunications | |
| 1992 | Rochester Telephone Company on corporate restructuring and deregulation | |
| 1992 | Russian Government on economic reform | |
| 1991 | British Mercury on terms of competition with British Telecom | |
| 1989 | City of Denver on charging and financing of Stapleton Airport | |
| 1988-1990 | Attorneys General, New York and Pennsylvania, on airline mergers | |
| 1985 | Attorney General, State of Illinois, on Illinois Bell rates | |
| 1981-1984 | City of Long Beach, California, the Coca-Cola Company and American Airlines | |
| | on antitrust litigation | |
| 1981-1997 | Economic commentary, Nightly Business Report (PBS) | |
| 1980-1982 | Advisor to Governor Carey on Telecommunications Policy | |
| 1968 | Ford Foundation | |
| 1966 | National Commission on Food Marketing | |
| 1965,1974 | Federal Trade Commission | |
| 1963-1964 | Antitrust Division, Department of Justice | |
| 1960-1961 | U.S. Department of Agriculture | |
| 1957-1961 | Boni Watkins, Jason & Co. | |
| See also the list of testimony below. | | |

MEMBERSHIPS:

1943-1944

1937-1938

| 1998- | Member, Committee for a Study of Competition in the U.S. Airline Industry, |
|-----------|--|
| | Transportation Research Board, National Research Council |
| 1992-1994 | Member, New York State Telecommunications Exchange |
| 1992-1993 | Member, Ohio Blue Ribbon Panel on Telecommunications Regulation |
| 1991- | Board of Editors, Review of Industrial Organization |
| 1990-1992 | Chairman, International Institute for Applied Systems Analysis Advisory |
| | Committee on Price Reform and Competition in the USSR |
| 1986 | Governor Cuomo's Advisory Panel on public power for Long Island |

| 1983-1989 | Governor Cuomo's Fact-finding Panel on Long Island Lighting Company's |
|-----------|--|
| | Nuclear Power Plant at Shoreham, L.I. |
| 1983-1990 | New York State Council on Fiscal and Economic Priorities |
| 1982- | The American Heritage Dictionary Usage Panel |
| 1982-1985 | Governing Board. Common Cause |
| 1980-1986 | Director, New York Airlines |
| 1978-1979 | National Commission for the Review of Antitrust Laws and Procedures |
| 1975-1977 | Project Committee. Electric Utility Rate Design Study, Electric Power Research |
| | Institute |
| 1974-1975 | National Academy of Science Review Commission on Sulfur Oxide Emissions |
| 1974-1977 | Public Advisory Board, Electric Power Research Institute |
| 1974-1977 | Environmental Advisory Committee, Federal Energy Administration |
| 1974-1977 | Executive Committee, National Association of Regulatory Utility |
| | Commissioners, and Chairman, Committee on Electric Energy |
| 1968-1974 | Economic Advisory Board, American Telephone & Telegraph Corporation |
| 1965-1967 | Economic Advisory Committee, U.S. Chamber of Commerce |
| 1967-1969 | Chairman, Tompkins County Economic Opportunity Corporation |
| 1964-1969 | Board of Trustees, Cornell University |
| 1961-1964 | Board of Editors, American Economic Review |
| 1953-1955 | Attorney General's National Committee to Study the Antitrust Laws |
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HONORS AND AWARDS:

| Apr 1999 | J. Rhoads Foster Award for achievements in economic regulation |
|-----------|---|
| Jan 1998 | Recipient of the 1997 Sovereign Fund Award "Honoring Vision, Commitment |
| | and Achievement in the Pursuit of Individual Freedom" |
| Dec 1997 | The 1997 L. Welch Pogue Award For Lifetime Contributions to Aviation |
| May 1995 | Wilbur Cross Medal for outstanding achievement, Yale University |
| Mar 1989 | Burton Gordon Feldman Award for Distinguished Public Service, Gordon Public |
| | Policy Center, Brandeis University |
| Feb 1989 | Distinguished Service Award, Public Utility Research Center, University of |
| | Florida |
| Nov 1988 | International Film and TV Festival of New York. Bronze Medal presented to The |
| | Nightly Business Report/WPBT2 for Editorial/Opinion Series written by Alfred |
| | E. Kahn |
| Apr 1986 | Harry E. Salzberg 1986 Honorary Medallion for outstanding achievement in the |
| | field of transportation |
| Oct 1984 | Distinguished Transportation Research Award of the Transportation Research |
| | Forum |
| 1981-1982 | Vice President, American Economic Association |
| 1978 | Richard T. Ely lecturer, American Economic Association, 1978 |
| 1978 | Rejection Scroll. International Association of Professional Bureaucrats |
| May 1985 | State University of New York (Albany), DHL (Hon.) |
| May 1983 | Colgate University, LL.D. (Hon.) |
| June 1982 | Northwestern University, LL.D. (Hon.) |
| May 1980 | Ripon College, LL.D. (Hon.) |
| May 1979 | University of Massachusetts, LL.D. (Hon.) |
| | |

| Colby College, LL.D. (Hon.) |
|--|
| Fellow of the American Academy of Arts and Sciences |
| Distinguished Alumni Award, New York University |
| American Economic Association, Section on Public Utilities and Transportation, |
| citation for distinguished contributions |
| Fulbright Fellowship, Italy |
| Phi Beta Kappa |
| Yale-Brookings Fellow |
| |

BOOKS:

Letting Go: Deregulating the Process of Deregulation, Michigan State University Institute of Public Utilities, July 1998.

The Economics of Regulation, 2 volumes, John Wiley, 1970 and 1971. Reprinted by The MIT Press, 1988, with a new "Introduction: A Postscript, Seventeen Years After," pp. xv-xxxvii.

Integration and Competition in the Petroleum Industry, (with Melvin G. DeChazeau), Petroleum Monograph Series, Volume 3 (Yale University Press, 1959). Reprinted in 1971.

Fair Competition: The Law and Economics of Antitrust Policy (with Joel B. Dirlam) (Cornell University Press, 1954). Reprinted by Greenwood Press, 1970.

Great Britain in the World Economy (Columbia University Press, 1946). Reprinted in 1968.

MAJOR ARTICLES:

"The Telecommunications Act At Three Years: An Economic Evaluation of Its Implementation by The Federal Communications Commission," with Timothy J. Tardiff and Dennis L. Weisman, forthcoming, *Information Economics and Policy*.

"Bribing Customers to Leave and Calling it 'Competition," *The Electricity Journal*, May 1999, pp. 88-90.

"Comments on Exclusionary Airline Pricing," Journal of Air Transport Management, Volume 5, Issue 1, January 1999, pp. 1-12.

"Resisting the Temptation to Micromanage: Lessons from Airlines and Trucking," Regulators' Revenge: The Future of Telecommunications Deregulation, CATO Institute, August 1998, pp. 17-27.

"Electric Deregulation: Defining and Ensuring Fair Competition," Electricity Journal, April 1998.

"Deregulation: Micromanaging the Entry and Survival of Competitors," Edison Electric Institute, February 1998.

"Competition and Stranded Costs Re-Revisited," 37:1 Natural Resources Journal, Winter 1997, pp. 29-42.

"How to Treat the Costs of Shared Voice and Video Networks in a Post-regulatory Age," *Policy Analysis*, #264, November 27, 1996, Cato Institute.

"Deregulation of the Public Utilities—Transitional Problems and Solutions," *Economic Paperst* Economic Society of Australia, September 1995, pp. 1-17. (Published in *Réseaux* nos. 72-73 Juillet/Octobre 1995 by CNET as "Déréglementation des Services Publics: Problèmes transitoires et solutions.")

"The Challenge for Federal and State Regulators: Transition from Regulation to Efficient Competition in Electric Power," with William J. Baumol and Paul L. Joskow, Edison Electric Institute, December 9, 1994.

"Competition in the Electric Industry Is Inevitable and Desirable," *The Electric Industry in Transition*, Public Utility Reports, Inc. and New York State Energy Research and Development Authority, December 1994, Chapter 3, pp. 21-31.

"Can Regulation and Competition Coexist? Solutions to the Stranded Cost Problem and Other Conundra," *The Electricity Journal*, Volume 7, Number 8, October 1994, pp. 23-35.

"The Pricing of Inputs Sold to Competitors: A Comment," in *Yale Journal on Regulation*, Vol. 11, No. 1, Winter 1994, pp. 225-240.

"Airline Deregulation," in *The Fortune Encyclopedia of Economics*, David R. Henderson, Ph.D., ed., New York: Warner Books, 1993, pp. 379-384.

"Change, Challenge and Competition The Report of the National Commission to Ensure a Strong Competitive Airline Industry, August 1993," Regulation, No. 3, 1993.

"The Competitive Consequences of Hub Dominance: A Case Study," in *Review of Industrial Organization*, Vol. 8, 1993, pp. 381-405.

"Pricing of Telecommunications Services: A Comment," in *Review of Industrial Organization*. Vol. 8, 1993, pp. 39-41.

"The Purposes and Limitations of Economic Regulation; The Achievements and Problems of Deregulation" and "Reflections and Conclusions on British and U.S. Experience: The Future of Regulation," in *Incentive Regulation: Reviewing RPI-X & Promoting Competition, Proceedings 2*. Based on papers presented at two CRI seminars in London on 4 June and 15 July 1992. CRI (Centre for the Study of Regulated Industries), October 1992, pp. 1-17 and 93-104.

"Market Power Issues in Deregulated Industries," in *Antitrust Law Journal*, Vol. 60, Issue 3, American Bar Association, 1992, pp. 857-866.

"Regolamentazione e concorrenza nelle imprese de pubblica utilità: un <<i inquadramento teorico>>," L'INDUSTRIA / n.s., a. XIII, n. 2, aprile-guigno 1992, pp. 147-166.

"Least cost planning generally and DSM in particular," in *Resources and Energy* 14 (1992), Elsevier Science Publishers, North-Holland, pp. 177-185.

"Price Deregulation, Corporatization and Competition" (with M.J. Peck), in *What is to be Done? Proposals for the Soviet Transition to the Market*, M.J. Peck and T.J. Richardson, eds., New Haven: Yale University Press, 1991.

"Thinking About Predation—A Personal Diary," in *Review of Industrial Organization*, Vol. 6, The Netherlands: Kluwer Academic Publishers, 1991, pp. 137-146.

- "An Economically Rational Approach to Least-Cost Planning For Electric Power," *The Electricity Journal*, Vol. 4, Number 5, June 1991, pp. 11-20.
- "The Changing Focus of Electric Utility Regulation," *Research in Law and Economics*, Richard O. Zerbe, Jr., Victor P. Goldberg, eds., Vol. 13, JAI Press, Inc., Spring 1991, pp. 221-231.
- "The Soviet Economic Crisis: Steps to Avert Collapse" (co-author), Executive Report 19, International Institute for Applied Systems Analysis, Laxenburg, Austria, February 1991.
- "Telecommunications, Competitiveness and Economic Development—What Makes Us Competitive?", Public Utilities Fortnightly, Vol. 126, No. 6, September 13, 1990, pp. 12-19.
- "Deregulation: Looking Backward and Looking Forward," Yale Journal on Regulation, Vol. 7, Spring 1990, pp. 325-354.
- "Do We Need to Curb the Investments Foreigners are Making in the United States?" in *The Impact of Foreign Investment in the United States*, Touche Ross & Co., June 1989.
- "Innovative Pricing of Electricity," in New Dimensions in Pricing Electricity: Proceedings, Palo Alto, CA: Electric Power Research Institute, April 1989.
- "Competition: Past, Present and Future, Perception vs. Reality," in *Proceedings: 1988 Utility Strategic Issues Forum Planning in a Competitive Environment*. Palo Alto, CA: Electric Power Research Institute, March 1988.
- "Thinking About The Record of Deregulation," in The Donald S. MacNaughton Symposium Proceedings 1987, *Economic Deregulation: Promise and Performance*, Syracuse, NY: Syracuse University, 1988, pp. 21-35.
- "In Defense of Deregulation," in *Cleared For Takeoff: Airline Labor Relations Since Deregulation*, Jean T. McKelvey, Editor, Ithaca, NY: Cornell University ILR Press, 1988, pp. 343-347."
- "I Would Do It Again," Regulation, 1988 Number 2, pp. 22-28.
- "Airline Deregulation," The Senior Economist, Joint Council on Economic Education, Spring 1988.
- "Airline Deregulation A Mixed Bag, But a Clear Success Nevertheless," *Transportation Law Journal*, Volume 16, No. 2, Spring 1988, pp. 229-251.
- "Surprises of Airline Deregulation," *The American Economic Review, Papers and Proceedings*, Volume 78, No. 2, May 1988, pp. 316-322.
- "Thoughts on the Past, Present, and Future of Telecommunications Regulation," talk presented to the Current Issues in Telephone Regulation conference at the University of Texas, Austin, October 5, 1987, reprinted in *Telecommunications Deregulation: Market Power and Cost Allocation Issues*, John R. Allison and Dennis L. Thomas, eds., Westport, CT: Quorum Books, 1990, pp. 259-268.
- "The Future of Local Telephone Service: Technology and Public Policy," Fishman Davidson Center for the Study of the Service Sector, The Wharton School of the University of Pennsylvania, Discussion Paper #22, June 1987. Reprinted in *Toward The Year 2000*, ITT Key Issues Lecture Series, 1986, (New York: ITT Corp. 1987), pp. 86-99.
- "Current Issues in Telecommunications Regulation: Pricing" (with William B. Shew), Yale Journal on Regulation, Vol. 4: 191-256, Spring 1987.

- "Deregulatory Schizophrenia," California Law Review, Volume 75, Number 3, May 1987, pp. 1059-1068.
- "A Critique of Proposed Changes," *The Future of Electrical Energy: A Regional Perspective of an Industry in Transition*, Sidney Saltzman and Richard E. Schuler (eds.), Praeger Publishers, New York, 1986, pp. 340-347.
- "The Tyranny of Small Decisions and the Perils of Big Ones," in *Allocation, Ethics, and Innovation in Research and Public Policy*, National Symposium on Science and Technology, Cornell University, Washington, D.C., May, 20, 1986.
- "The Theory and Application of Regulation." *Antitrust Law Journal*, Spring Meeting Issue, 1986, Volume 55, Issue 1, pp. 177-184, from ABA Antitrust Section Annual Meeting.
- "Transportation Deregulation...And All That," Honorary Salzberg Memorial Lecture, Syracuse University School of Management, Syracuse, New York, April 1986. Reprinted, revised, in *Economic Development Quarterly*, May 1987, Volume 1, Number 2, pp. 91-99.
- "Frontier Issues in Telecommunications Regulation," Mountain Bell Academic Seminar, Lakewood, Colorado, August 1985.
- "Telecommunications Regulation: A Case Study of the Impact of a Technology on Social Institutions," for presentation at Cornell University Electrical Engineering Centennial Symposium, Ithaca, New York, June 12, 1985.
- "Public Policies for Our Telecommunications Future," in *Funding the Future of Telecommunications*, a conference sponsored by Rensselaer Polytechnic Institute, supported by the NYNEX Telephone Companies, Saratoga Springs, New York, June 3-5, 1985.
- "Industrial Policy and Deregulation," Federal Bar News & Journal, Washington, D.C., January 1985.
- First Distinguished Lecture on Economics in Government, "The Macroeconomic Consequences of Sensible Microeconomic Policies," Dallas, December 28, 1984. American Economic Association meetings.
- "The Regulatory Agenda," and "Concluding Comments: The Future of Access," in Alan Baughcum and Gerald R. Faulhaber, *Telecommunications Access & Public Policy*, Ablex Publishing Corporation, Norwood, New Jersey, 1984, pp. 205-210 and pp. 245-253.
- "The Uneasy Marriage of Regulation and Competition," *Telematics*, Washington, D.C., September 1984, pp. 1-2, 8-17.
- "The Next Steps in Telecommunications Regulation and Research," *Public Utilities Fortnightly*. Arlington, VA., July 19, 1984.
- "The Road to More Intelligent Telephone Pricing," Yale Journal on Regulation, Volume 1, Number 2, 1984, pp. 139-157.
- "Telephone Deregulation: Two Views: A Needed Dose of Competition," *Challenge*, March/April 1984, pp. 24-29.
- "Economic Policies For The 80s," Oppenstein Brothers Foundation Lecture, Rockhurst College and the University of Missouri, Kansas City, April 19, 1983.

- "The Relevance of Industrial Organization." *Industrial Organization, Antitrust, and Public Policy*, John V. Craven, ed., Kluwer-Nihjoff, 1983.
- "Some Thoughts on Telephone Access Pricing," National Economic Research Associates, April 1983.
- "Deregulation: Its Meaning and Implications for Antitrust Enforcement," New York State Bar Association, 1983 Antitrust Law Symposium, pp. 2-14.
- "The Passing of the Public Utility Concept: A Reprise," in *Telecommunications Today and Tomorrow*, Eli Noam (ed.) Harcourt Brace Jovanovich, 1983.
- "Deregulation and Vested Interests: The Case of Airlines," *The Political Economy of Deregulation*, Roger G. Noll and Bruce M. Owen, eds., American Enterprise Institute Studies in Government Regulation, 1983.
- "An Alternative to Reaganomics," *Increasing Understanding of Public Problems and Policies*. 1982, Farm Foundation, January 1983.
- "Utility Diversification," The Energy Journal, Volume 4, No. 1, January 1983, pp. 149-160.
- "The Airline Industry: Is It Time to Reregulate?" Second Annual William A. Patterson Transportation Lecture, The Transportation Center, Northwestern University. Published jointly with National Economic Research Associates, 1982. Reprinted in The World Economy, December 1982, London: Basil Blackwell, pp. 341-360.
- "On Changing the Consumer Price Index, A Comment," Journal of Policy Analysis and Management, Vol. 1 (Summer 1982), pp. 512-15.
- "The Political Feasibility of Regulatory Reform: How Did We Do It?" Reforming Social Regulation: Alternative Public Policy Strategies, Leroy Graymer and Frederick Thompson (eds.), Sage Publications, 1982.
- "The Reform of Government Regulation: Recent Progress in the United States," University of Leuven Press, Leuven, Belgium, 1981.
- "The New Merger Wave," N/E/R/A Topics, National Economic Research Associates, December 1981.
- "Liberals Must Face Facts," Challenge, Nov/Dec. 1981, pp. 25-32.
- "Is Inflation Abating?" N/E/R/A Topics, National Economic Research Associates, November 1981.
- "Utility Regulation Revisited," National Economic Research Associates: New York, 1981, republished in *Current Issues in Public Utility Economics: Essays in Honor of James C. Bonbright*, Albert L. Danielsen and David R. Kamerschen (eds.), Lexington, MA., D.C. Heath and Company, 1983.
- "Must We Live With Inflation Through the 1980s?" Major Issues of the 1980s Lecture Series. Sponsored jointly by the Lowell Institute of Boston and Harvard University Extension. April 1981.
- "Ethical Values in a Market System," Across the Board, The Conference Board, April 1981, pp. 57-63.
- "Can Liberalism Survive Inflation?" The Economist, March 7, 1981, pp. 21-25.

- "Health Care Economics: Paths to Structural Reform," in Mancur Olson (ed.), A New Approach to the Economics of Health Care, Washington, American Enterprise Institute, 1981.
- "Regulation and the Imagination." *Proceedings of a Regulatory Council Conference*, United States Regulatory Council, July 22, 1980, pp. 1-9.
- "Health Care and Inflation: Social Compassion and Efficient Choice," *National Journal*, August 2, 1980, pp. 1294-97.
- "A Paean to Legal Creativity" (with Michael Roach), Administrative Law Review, Washington, D.C., Winter 1979, Volume 31, No. 1, pp. 97-114.
- "Applications of Economics to an Imperfect World," *Regulation*, Washington, D.C., November/December 1978, Volume 2, No. 6, pp. 17-27; The Richard T. Ely lecture, *The American Economic Review, Papers and Proceedings*, Volume 69, No. 2, May 1979, pp. 1-13.
- "The Changing Environment of International Air Commerce," Air Law, (Netherlands Journal), Volume 3, No. 3, 1978.
- "Deregulation of Air Transportation—Getting from Here to There," *Regulating Business: The Search for an Optimum*, Institute for Contemporary Studies, San Francisco, California, 1978. pp. 37-63.
- "Load Control, Resource Conservation and King Charles' Head," Iowa State University Regulating Conference, *Proceedings*, May 19, 1977, pp. 68-74.
- "Recent Developments in Cost Analysis and Rate Design," *Proceedings of the Third Annual Symposium on Problems of Regulated Industries*, Kansas City, Missouri, February 14, 1977, pp. 15-28.
- "An Economist at Work on Utility Rate Regulation," a series of three articles, *Public Utilities Fortnightly*, Washington, D.C., January 5, 19, and February 2, 1978.
- "New Rate Structures in Communications" (with Charles A. Zielinski), *Public Utilities Fortnightly*, March 25, 1976, pp. 19-24 and April 8, 1976, pp. 20-23.
- "Efficient Rate Design: The Transition from Theory to Practice," *Proceedings of the Symposium on Rate Design Problems of Regulated Industries*, February 23-26, 1975, Kansas City, Missouri, pp. 34-51.
- "Between Theory and Practice: Reflections of a Neophyte Public Utility Regulator," *Public Utilities Fortnightly*, January 2, 1975, pp. 3-7.
- "Economic Theory as a Guideline for Government Intervention and Control: Comment," *Journal of Economic Issues*, Vol. VIII, No. 2, June 1974.
- "Market Power Inflation: A Conceptual Framework," in *The Roots of Inflation*, Burt Franklin and Co., 1975.
- "The Economics of the Electricity-Environmental Issue: A Primer," P.I.P. National Environmental Press Seminar, Minneapolis, Minnesota, May 31-June 1, 1972.
- "Evaluation of Economic Regulation: Discussion," Ibid, LXI (May 1971) 235-237.

- "National Communications Policy: Discussion." The American Economic Review, Papers and Proceedings, Volume 60, May 1970, pp. 219-20.
- "Dual Pricing in Southern Louisiana: A Reply," Land Economics, XLVI (August 1970): 338-42.
- "The Combined Effects of Prorationing, the Depletion Allowance and Import Quotas on the Cost of Producing Crude Oil in the United States," U.S. Senate, Committee on the Judiciary, Subcommittee on Antitrust and Monopoly, 91st Congress, 1st Session, *Government Intervention in the Market Mechanism, Hearings, The Petroleum Industry*, Part I. Washington, 1969, Reproduced in *Natural Resources Journal* (January 1970) X:53-61.
- "Incentives to Superior Performance: Pricing," Harry Trebing (ed.), Performance Under Regulation, Michigan State University Press, 1968.
- "The Graduated Fair Return," The American Economic Review, March 1968.
- "Cartels and Trade Associations," Encyclopedia of the Social Sciences, MacMillan, 1968.
- "The Merits of Reserving the Cost-Savings From Domestic Communications Satellites for Support of Educational Television" (with Joel B. Dirlam), *Yale Law Journal*, Volume 77, No. 3, January 1968, pp. 494-520.
- "Tyranny of Small Decisions: Market Failures, Imperfections, and the Limits of Economics," Kyklos, Volume 19, 1966.
- "Mergers in the Petroleum Industry and Problems of the Independent Refiner," U.S. Senate Judiciary Committee, *Economic Concentration*, Part II, Washington, 1965, pp. 562-609.
- "The Depletion Allowance in the Context of Cartelization," *The American Economic Review*, Volume 54, 1964, pp. 286-314.
- "Efficiency in the Use of Natural Resources: Discussion," *The American Economic Review, Papers and Proceedings*, Volume 54, May 1964, pp. 221-226.
- "Market Power and Economic Growth: Guides to Public Policy." *Antitrust Bulletin*. Volume 8, May-June 1962, p. 531.
- "Agricultural Aid and Economic Development: The Case of Israel." The Quarterly Journal of Economics, Volume 76, November 1962, pp. 568-591.
- "The Role of Patents," in J.P. Miller, ed., Competition, Cartels and Their Regulation (North Holland Publishing Company, Amsterdam), Chapter 8, pp. 308-346.
- "The Chemical Industry," Walter Adams (ed.) *The Structure of the American Industry*, First, Second and Third Editions, New York, MacMillan, 1948, 1954 and 1961.
- "Economic Issues in Regulating the Field Price of Natural Gas," *The American Economic Review. Papers and Proceedings*, Volume 50, May 1960, pp. 506-517.
- "Pricing Objectives in Large Companies: Comment," *The American Economic Review*, Volume 49, September 1959, pp. 670-678.
- "Selected Papers: A.E.A. Competition: Discussion," *The American Economic Review, Papers and Proceedings*, Volume 48, May 1958, pp. 600-602.

- "Economic and Legal Approaches to Antitrust: An Attempt to Clarify the Issues," *Antitrust Bulletin*, Volume 2, January 1957, pp. 267-279.
- "Report on Antitrust Policy: Discussion," *The American Economic Review, Papers and Proceedings*, Volume 46, May 1956, pp. 496-507.
- "My Antitrust Philosophy: Evidence of Schizophrenia or Shattering Transformation?" *Antitrust Bulletin*, Volume 1, November 1955, p. 355.
- "Regulation of Crude Oil Production in the United States and Lessons for Italy," *Banca Nazionale Del Lavoro Monthly Review*, Volume 8, June 1955, pp. 67-79.
- "A Rejoinder" (with Joel B. Dirlam), *Indiana Law Journal*, Volume 29, Spring 1954, pp. 371-375.
- "Legal and Economic Appraisal of the 'New' Sherman and Clayton Acts," Yale Law Journal, Volume 63, January 1954, pp. 293-347.
- "Standards for Antitrust Policy," *Harvard Law Review*, Volume 67, November 1953, pp. 28-54. Also reprinted in Homewood-Irwin, *Readings in Industrial Organization and Public Policy* (American Economic Association, 1958), pp. 352-375.
- "A Reply" (with Joel B. Dirlam), Journal of Political Economy, Volume 61, October 1953, pp. 441-446.
- "The Integration and Dissolution of the A & P Company" (with Joel B. Dirlam), *Indiana Law Journal*, Volume 29, Fall 1953, pp. 1-27.
- "Big Business in a Competitive Society" (with A.D.H. Kaplan), Fortune, Volume 47. Supp., February 1953.
- "Leadership and Conflict in the Pricing of Gasoline" (with Joel B. Dirlam), *Yale Law Journal*, Volume 61, June-July 1952, pp. 818-855.
- "Price Discrimination in Law and Economics" (with Joel B. Dirlam), *The American Journal of Economics and Sociology (Essays in Honor of Harry Gunnison Brown)*, Volume 11, April 1952, pp. 281-313.
- "Antitrust Law and the Big Buyer: Another Look at the A & P Case" (with Joel B. Dirlam). *Journal of Political Economy*, Volume 60, April 1952, pp. 118-132.
- "Investment Criteria in Development Programs," *The Quarterly Journal of Economics*, Volume 65, February 1951, pp. 38-61.
- "The Burden of Import Duties, A Comment," *The American Economic Review*, Volume 38, December 1948, pp. 857-867.
- "Patent Policy: Discussion," *The American Economic Review, Papers and Proceedings*, Volume 38, May 1948, pp. 245-260.
- "The British Balance of Payments, and Problems of Domestic Policy," *The Quarterly Journal of Economics*, Volume 61, May 1947, pp. 368-396.
- "Palestine: A Problem in Economic Evaluation," *The American Economic Review*, Volume 34. September 1944, pp. 538-560.

"Fundamental Deficiencies of American Patent Law," *The American Economic Review*, Volume 30, September 1940, pp. 475-491.

U.S. CONGRESSIONAL TESTIMONY:

Transportation Subcommittee of the Senate Committee on Commerce, Science and Transportation on predatory pricing in the airline industry, May 5, 1998.

Aviation Subcommittee of the Senate Committee on Commerce, Science, and Transportation on predatory pricing in the airline industry, April 23, 1998.

Subcommittee on Railroads of the House Committee on Transportation and Infrastructure. Public Hearing on Surface Transportation Board Reauthorization: State of the Railroad Industry, April 22, 1998.

Aviation Subcommittee of the House Committee on Public Works and Transportation on international aviation policy, May 9, 1991.

Subcommittee on Aviation of the Senate Committee on Commerce, Science and Transportation on airline concentration at hub airports, September 22, 1988.

Subcommittee on Aviation of the Senate Committee on Commerce, Science and Transportation on airline safety and re-regulation, November 4, 1987.

Subcommittee on Telecommunications and Finance, House Committee on Energy and Commerce, on competition and deregulation of the telecommunications industry, July 15, 1987.

Subcommittee on Antitrust and Monopoly of the Senate Committee on the Judiciary, on competitive issues in the airline industry, March 25, 1987.

Subcommittee on Monopolies and Commercial Law, Committee on the Judiciary, U.S. House of Representatives, on the Administration's proposed amendments to Section 7 of the Clayton Act, February 26, 1986.

Subcommittee on Aviation of the Senate Committee on Commerce, Science and Transportation on Computerized Reservation Systems, March 19, 1985.

Joint Economic Committee, United States Senate, Hearing on the Economic Issues of a Changing Telecommunications Industry, October 3, 1983.

House Subcommittee on Aviation on "Competitive Problems Raised by Computerized Reservation Systems," June 22, 1983.

House Committee on the Judiciary, on H.R. 1878, "The Shipping Act of 1983." May 19, 1983.

House Committee on Public Works and Transportation on "Coal Slurry Pipelines," April 13, 1983.

House Committee on the Judiciary, on H.J. Res. 350, A Plan to Balance the Federal Budget. August 4, 1982.

Senate Committee on the Judiciary, on S. 1215, the Malt Beverage Competition Act, June 21, 1982.

Subcommittee on Investigations and Oversight, House Committee on Public Works and Transportation, "Development, Operation and Implementation of the United States International Aviation Policy," December 9, 1981.

Joint Economic Committee; U.S. Congress on "Trucking Regulation." November 17, 1981.

Subcommittee on Monopolies and Commercial Law. House Committee on the Judiciary. "Mergers," August 26, 1981.

Senate Committee on Commerce, Science and Transportation, on S. 898, "The Telecommunications Act of 1981," June 11, 1981.

Subcommittee on Telecommunications, Consumer Protection, and Finance, House Committee on Energy and Commerce, "Telecommunications Regulation," May 20, 1981.

Subcommittee on Health, Senate Committee on Finance, on "The Health Incentives Reform Act." March 19, 1980.

House Budget Committee Inflation Task Force, on the "Treatment of Housing Costs in the Consumer Price Index," January 24, 1980.

Senate Committee on Banking, Housing, and Urban Affairs, on "The Chrysler Loan Guarantee Act," November 15, 1979.

Subcommittee on Surface Transportation, House Committee on Public Works and Transportation, on "Trucking Deregulation," October 4, 1979.

Senate Committee on Commerce, Science, and Transportation, on "Trucking Deregulation," June 26, 1979.

Subcommittee on the Legislative Process, House Rules Committee, on "Sunset Legislation," May 23, 1979.

Testimony on food prices and inflation, before:

- a) House Subcommittee on Domestic Marketing, Consumer Relations and Nutrition; and Subcommittee on Department Investigations, Oversight and Research, Committee on Agriculture, April 4, 1979.
- b) Subcommittee on Antitrust and Monopoly, Senate Committee on the Judiciary, April 6, 1979.

Testimony on hospital cost containment legislation, before:

- a) Subcommittee on Health and the Environment, House Interstate and Foreign Commerce Committee; and Subcommittee on Health, House Ways and Means Committee, March 12, 1979.
- b) Health Subcommittee, Senate Finance Committee, March 13, 1979.

Subcommittee on Environmental Pollution, Senate Committee on Environment and Public Works, on "Environmental Regulation and Inflation," February 27, 1979.

Testimony on authorization and appropriations for the Council on Wage and Price Stability, before:

- a) Subcommittee on Economic Stabilization, House Committee on Banking, Finance and Urban Affairs, February 6, 1979.
- b) Senate Subcommittee on Commerce, Consumer and Monetary Affairs, February 7, 1979.
- c) Senate Committee on Banking, Housing and Urban Affairs, February 9, 1979.
- d) Subcommittee on Treasury, Postal Service, and General Government, House Committee on Appropriations, May 24, 1979.
- e) House Appropriations Committee, February 6, 1980.
- f) Senate Committee on Banking, Housing, and Urban Affairs, March 17, 1980.
- g) Subcommittee on Treasury, Postal Service, and General Government, House Committee on Appropriations, March 31, 1980.
- h) Senate Committee on Banking, Housing and Urban Affairs, April 21, 1980.
- i) Subcommittee on Treasury, Postal Service, and General Government, Senate Committee on Appropriations, April 23, 1980.
- j) Subcommittee on Economic Stabilization, House Banking Committee, May 6, 1980.

House Committee on Ways and Means, on "Real Wage Insurance," January 30, 1979.

Testimony on the President's anti-inflation program, before:

- a) Subcommittee on Economic Stabilization, House Committee on Banking, Currency, and Housing. November 22, 1978.
- b) Subcommittee on Economic Growth and Stabilization, Joint Economic Committee, December 6, 1978.
- c) House Committee on the Budget, January 30, 1979.
- d) Subcommittee on Treasury, Postal Services, and General Government. House Committee on Appropriations, February 14, 1979.
- e) Senate Budget Committee, March 7, 1979.
- f) Subcommittee on Commerce, Consumer and Monetary Affairs, House Committee on Government Operations, June 28, 1979.
- g) Economic Stabilization Subcommittee, House Committee on Banking, Finance and Urban Affairs, October 10, 1979.
- h) Economic Stabilization Subcommittee, Senate Committee on Banking, Housing and Urban Affairs, October 11, 1979.

Subcommittee on Aviation, Senate Commerce, Science, and Transportation Committee, on S. 3363, "The International Air Transportation Competition Act of 1978," August 23, 1978.

National Commission for the Review of Antitrust Laws and Procedures, on "Economic Regulation and Antitrust Exemptions and Immunities," July 26, 1978.

Senate Commerce Committee, on S. 3064, "Airline Noise Legislation," June 14, 1978.

Testimony on CAB appropriations, before:

- a) House Subcommittee on Appropriations, February 28, 1978.
- b) Senate Subcommittee on Appropriations, March 2, 1978.

Testimony on United States international aviation negotiations, before:

- a) Subcommittee on Aviation, House Committee on Public Works and Transportation, September 29, 1977
- b) Aviation Subcommittee, House Public Works and Transportation Committee, on H.R. 11145, March 6, 1978.

House Budget Committee Task Force on Tax Expenditures, Government Organization, and Regulation, on "Airline Regulation," July 14, 1977.

Senate Antitrust and Monopoly Subcommittee, Oversight Hearings on Antitrust Enforcement, on "Enforcement of the Antitrust Laws," May 4, 1977.

Subcommittee on Investigations and Review, House Committee on Public Works and Transportation, on "The Effects of the Clean Water Act on the Electric Utility Industry," April 19, 1977.

Subcommittee on Communications, Senate Committee on Commerce, on "The Communications Act of 1934 Revisited," March 21, 1977.

Subcommittee on Communications, House Committee on Interstate and Foreign Commerce, on "The Consumer Communications Reform Act of 1976," H.R. 12323, September 30, 1976.

Subcommittee on Energy and Power, House Committee on Interstate and Foreign Commerce, on H.R. 12461, the Dingell-Moss Bill, to Prescribe Certain Rules for Federal, State and Local Agencies Regulating Electric Rates, April 7, 1976.

House Subcommittee on Communications, on "Domestic Common Carrier Regulation," November 18, 1975.

Senate Committee on Finance, on H.R. 6860, "The Energy Conservation and Conversion Act of 1975," July 18, 1975.

Subcommittee on Administrative Practice and Procedure, Senate Judiciary Committee, on "Regulation of the Airlines Industry," February 6, 1975.

Senate Committee on Interior and Insular Affairs, on "Financial Problems of the Electric Utility Industry," August 8, 1974.

Joint Economic Committee, U.S. Congress on "Market Power in Relation to Economic Growth," August 1962.

Senate Subcommittee on Patents, on natural rubber cartels, May 23, 1942.

TESTIMONY BEFORE THE FEDERAL POWER COMMISSION, 1958-62

In the matters of:

Area Rate Proceeding (Southern Louisiana Area), Docket Nos. AR61-2, et al.

Area Rate Proceeding (Permian Basin Area), Docket Nos. AR61-1, et al.

Omnibus, Docket Nos. G-9277, et al.

Atlantic Refining Company (Catco), Docket Nos. G-11024, et al.

Sohio Petroleum Company, et al., Docket Nos. G-8488, et al.

Gulf Oil Corporation, Docket Nos. G-9520, et al.

Amerada Petroleum Corporation, et al., Docket Nos. G-9385, et al.

Union Producing Company, Docket Nos. G-18354, et al.

Phillips Petroleum Company, Docket Nos. G-1148, et al.

Tidewater Oil Company, Docket Nos. G-13310, et al.

MISCELLANEOUS TESTIMONY:

Rebuttal Testimony before the Public Service Commission of Maryland, defending a regulated electric distribution company's ability to offer a regulated retail electric generation service and of an unregulated affiliate offering competitive services and the sufficiency of the Maryland Code of Conduct to prevent distortions of competition and cross-subsidization; and defending Baltimore Gas and Electric's proposed shopping credit, on behalf of Baltimore Gas and Electric Company. Case Nos. 8794/8804, March 22, 1999.

"High Capacity Competition in Seattle: Reply to Comments of Intervening Parties," on behalf of U S West (with Timothy J. Tardiff), March 10, 1999.

Testimony before the Public Service Commission of the State of Missouri in the matter of application of SBC Communications, Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc., d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Missouri, on behalf of Southwestern Bell Telephone Company (with Timothy J. Tardiff), Docket No. TO 99-227, filed November 20, 1998; Surrebuttal Affidavit, February 1, 1999.

Rebuttal Testimony before The Commonwealth of Massachusetts Department of Telecommunications and Energy on public policy considerations and principles re the Boston Edison Company/RCN joint venture (DPU 93-37), on behalf of Boston Edison Company, DTE 97-95, February 12, 1999.

"Comments on Exclusionary Airline Pricing," Submission to the Department of Transportation. September 25, 1998.

"Economic Evaluation of High Capacity Competition in Phoenix," on behalf of U S WEST Communications, requesting that the FCC forebear from regulating it as a dominant carrier in its

sale of high capacity services in the Phoenix metropolitan area (with Timothy J. Tardiff). August 14, 1998 (filed August 19, 1998).

Declaration before the Federal Communications Commission in the matter of Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996 (CC Docket No. 96-128), on behalf of the RBOC/GTE/SNET Payphone Coalition, July 13, 1998.

Testimony before the Public Service Commission of Maryland evaluating the restructuring plan proposed by Baltimore Gas & Electric Company (Case No. 8794), on behalf of Baltimore Gas & Electric Company, July 1, 1998.

Statement before the Public Utility Commission of Texas regarding the Proposed Rulemaking on Code of Conduct for Electric Utilities and Their Affiliates, on behalf of Texas Utilities, June 19, 1998.

Affidavit Before the Federal Communications Commission in the matter of Application of SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Arkansas (with Timothy J. Tardiff), February 24, 1998; Rebuttal Affidavit, June 12, 1998.

Comments on the Pennsylvania Public Utility Commission Proposed Rulemaking Regarding the Establishment of Competitive Safeguards for the Pennsylvania Electric Industry, on behalf of the Pennsylvania Electric Association, June 9, 1998.

Testimony Before the State Corporation Commission of the State of Kansas in the matter of Southwestern Bell Telephone Company – Kansas' Compliance With Section 271 of the Federal Telecommunications Act of 1996, Docket No. 97-SWBT-411-GIT (with Timothy J. Tardiff). February 17, 1998; Rebuttal Testimony, May 27, 1998.

Rebuttal Affidavit Before the Public Utilities Commission of the State of California in support of Pacific Bell's Draft Application for Authority to Provide InterLATA Services in California (with Timothy J. Tardiff), May 20, 1998.

Rebuttal Testimony Before the Oklahoma Public Service Commission, in support of the Applications of SBC Communications, Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc., for Provision of In-Region InterLATA Services in Oklahoma, Cause No. PUD 970000560 (with Timothy J. Tardiff), April 21, 1998.

Testimony Before the State of New Jersey Board of Public Utilities, in the matter of Energy Master Plan Phase II Proceeding to Investigate the Future Structure of the Electric Power Industry, Docket Nos. EX94120585Y and EO97070463, regarding restructuring basic generation service, on behalf of Public Service Electric and Gas Company, April 16, 1998.

Affidavit before the Federal Communications Commission in the matter of Application of SBC Communications Inc., Southwestern Bell Telephone Company and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region InterLATA Services in Texas (with Timothy J. Tardiff), March 2, 1998; Reply Affidavit April 17, 1998.

Affidavit Before the Federal Communications Commission in the matter of Application of SBC Communications Inc., Pacific Bell, and Pacific Bell Communications for Provision of In-Region InterLATA Services in California (with Timothy J. Tardiff), March 31, 1998.

Affidavit Before the Illinois Commerce Commission in the matter of Implementation of Section 16-121 of the Public Utilities Act, No. 98-0035, on behalf of Ameren Services, February 17, 1998; Rebuttal Affidavit, March 12, 1998.

Affidavit Before the Federal Communications Commission in the matter of Application of SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region. InterLATA Services in Oklahoma (with Timothy J. Tardiff), February 13, 1998.

Testimony Before the Massachusetts Department of Public Utilities on public policy considerations and principles re the Boston Edison Company/RCN joint venture (DPU 93-37), December 29, 1997.

Testimony Before the Massachusetts Department of Public Utilities on the Standards of Conduct for Distribution Companies and Their Affiliated Companies, on behalf of Boston Edison Company (DPU 97-96), November 21, 1997.

Statement Before the California Public Utilities Commission on Order Instituting Investigation to Establish Standards of Conduct Governing Relationships between Energy Utilities and Their Affiliates, on behalf of Edison Electric Institute (Docket No. I.97-04-012), November 17, 1997.

Rebuttal Testimony Before the Delaware Public Service Commission Concerning the Cost Accounting Manual and the Code of Conduct, on behalf of Delmarva Power & Light Company. Docket No. 97-65, October 20, 1997.

Verified Statement Before the Surface Transportation Board on the need for shipper protections created by the acquisition of Conrail by the Norfolk & Southern and CSX Railroads, on behalf of electric utility shippers of coal (with Frederick C. Dunbar). Finance Docket No. 33388, October 20, 1997.

Testimony Before the Public Utility Commission of the State of Texas evaluating AT&T's proposed rates for unbundled network elements, on behalf of Southwestern Bell Telephone Company. Docket Nos. 16189, et al. September 15, 1997.

Affidavit Before the Public Service Commission of the State of Missouri In the Matter of AT&T Communications of the Southwest, Inc.'s Petition for Arbitration pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Southwestern Bell Telephone Company, Case No. TO-97-40, on behalf of Southwestern Bell, August 20, 1997.

Rebuttal Testimony Before the Pennsylvania Public Utility Commission on the merits of stranded cost recovery, the estimation of stranded costs and competitive safeguards, on behalf of Pennsylvania Power & Light Company, Docket No. R-00973954, August 4, 1997.

Affidavit Before the Federal Communications Commission In the matter of Application of SBC Communications, Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc., for Provisions of In-Region, InterLATA Services in Oklahoma, CC Docket 97-121 (with Timothy J. Tardiff), on behalf of Southwestern Bell, February 13, 1997 (Filed April 7, 1997); Reply Affidavit, May 28, 1997.

Affidavit Before the Federal Communications Commission In the matter of Application of SBC Communications, Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc., for Provision of In-Region, InterLATA Services in Kansas, CC Docket 97-121 (with Timothy J. Tardiff), on behalf of Southwestern Bell, April, 1997.

Statement in Support of The Southern New England Telephone Company's Proposed Reorganization, on behalf of SNET, March 24, 1997.

Statement of Professor Alfred E. Kahn and Report of Professor Jerome E. Hass on Railroad Revenue Adequacy Standards, analyzing the methods by which the Surface Transportation Board determines whether individual railroads are or are not "revenue adequate," on behalf of the Alliance for Rail Competition, February 1997.

Statement of Alfred E. Kahn on FCC's Proposed Reforms of Carrier Access Charges (re proposed Order in CC Docket No. 96-488), on behalf of the United States Telephone Association, February 14, 1997.

Verified Statement Before the Surface Transportation Board on behalf of the National Industrial Transportation League and the Western Coal Traffic League commenting on the joint statement submitted by the Association of American Railroads, Docket No. 41626, Docket No. 41242, Docket No. 41295, November 27, 1996.

"Joint Marketing, Personnel Separation and Efficient Competition Under the Telecommunications Act of 1996" (with Timothy J. Tardiff), a statement on behalf of U S West commenting on the FCC's NPRM of July 17th, in CC Docket No. 96-149, October 11, 1996.

"Economic Competition in Local Exchange Markets" (with Kenneth Gordon and William E. Taylor), on behalf of Bell Atlantic Company, commenting on a statement by seven economists on the pricing of essential network elements submitted by AT&T in state arbitration proceedings, August 9, 1996.

Declaration Before the Federal Communications Commission In the Matter of Allocation of Costs Associated with Local Exchange Carrier Provision of Video Programming Services, CC Docket No. 96-112, July 19, 1996.

Testimony before the Kansas Corporation Commission commenting on the continuing regulation and deregulation of the telecommunications industry in Kansas with reference to Competition docket HB 2728, on behalf of Southwestern Bell, Docket No. 190,492-U, June 14, 1996.

Declaration before the Federal Communications Commission In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, on behalf of Bell Atlantic (with Timothy J. Tardiff), CC Docket No. 96-98, May 30, 1996.

Testimony before the Public Service Commission of Maryland In Support of the Petition of Bell Atlantic - Maryland, Inc. for Adoption of a Price Cap Form of Alternative Regulation, on behalf of Bell Atlantic - Maryland, February 15, 1996; Rebuttal March 14, 1996; Surrebuttal April 1, 1996.

Testimony before the Public Service Commission of Pennsylvania regarding the Formal Investigation to Examine and Establish Updated Universal Service Principles and Policies for Telecommunications Services, Docket No. I-940035, on behalf of Bell Atlantic - Pennsylvania, Inc., December 7, 1995; Rebuttal, February 14, 1996.

Affidavit before the Public Service Commission of Maryland In the Matter of the Petition of Bell Atlantic-Maryland, Inc. for Adoption of an Alternative Form of Regulation pursuant to Amended Public Service Commission Law, Article 78, Section 69(E), on behalf of Bell Atlantic-Maryland, December 21, 1995.

Rebuttal Testimony before the State of Connecticut Department of Public Utility Control, discussing network unbundling, universal service and apportioning loop costs between telephone and video services, on behalf of the Southern New England Telephone Company, Docket No. 95-06-17, September 20, 1995.

Affidavit In the United States District Court for the Eastern District of Virginia (Alexandria Division) in the matter of United States Telephone Association. et al v. Federal Communications Commission, Civil Action No. 95-533-A, on behalf of USTA (with William E. Taylor), October 24, 1995.

"Preserving Universality of Subscription to Telephone Service in an Increasingly Competitive Industry" (with Timothy J. Tardiff), before the Public Utilities Commission of the State of California, on behalf of Pacific Bell, September 1, 1995.

Rebuttal Testimony before the Commonwealth of Massachusetts Department of Public Utilities, Docket 94-185, discussing network unbundling and universality of service, on behalf of NYNEX, August 23, 1995.

"Alternative Regulation for Connecticut Telecommunications Services," before the Connecticut Department of Public Utility Control, discussing the economic principles that should guide the introduction of an alternative form of regulation for noncompetitive telecommunications services, on behalf of the Southern New England Telephone Company, Docket No. 95-03-01, June 15, 1995.

Rebuttal Testimony before the New Jersey Board of Regulatory Commissioners, in the matter of the Investigation Regarding IntraLATA Toll Service Competition on a Presubscription Basis, Docket No. TX94090388, on behalf of Bell Atlantic - New Jersey, Inc., May 31, 1995.

Testimony before the Connecticut Department of Public Utility Control on strandable investments, on behalf of United Illuminating, Docket 94-12-13, March 24, 1995.

"Rebuttal Evidence on Rate-base Splitting, Price Caps and the Treatment of Economies of Scope in Telecommunications Regulation," submission to Canadian Radio/television and Telecommunications Commission, Ottawa, Ontario, Canada, on behalf of AGT Limited, March 30, 1995.

"Preconditions of Efficiently Competitive Local Exchange Markets." submission to Canadian Radio/television and Telecommunications Commission. Ottawa, Ontario, Canada, on behalf of AGT Limited, March 15, 1995.

Testimony before the Connecticut Department of Public Utility Control, Docket Nos. 94-10-01-02. on incremental cost standards for network unbundling, on behalf of the Southern New England Telephone Company, January 10, 1995; Rebuttal Testimony, February 13, 1995.

"Comments on Competition in Electric Power," submission to Rhode Island Division of Public Utilities and Carriers, inquiry into retail competition in the electric utility industry, on behalf of The Narragansett Electric Company, Docket D-94-9, November 18, 1994.

Testimony before the State of New York Public Service Commission in the Petition of Rochester Telephone Corporation for Approval of Proposed Restructuring Plan (Panel on Public Policy Issues with Robert W. Crandall), Case Nos. 93-C-0033 and 93-C-0103, February 3, 1993; Testimony of Panel on Public Policy Issues in Support of Settlement, June 17, 1994; Rebuttal Testimony of Panel on Public Policy Issues, July 22, 1994.

Affidavit before the Federal Communications Commission In the Matter of Price Cap Performance Review for Local Exchange Carriers, Notice of Proposed Rulemaking, on behalf of Bell Atlantic, filed June 29, 1994.

Affidavit before the U.S. District Court for the Northern District of Alabama Southern Division on behalf of BellSouth Corporation on overturning the statutory prohibition of telephone companies carrying their own video programming, filed June 3, 1994.

Reply Affidavit before the U.S. District Court for the District of Michigan (Eastern Division) on behalf of Ameritech Corporation on overturning the statutory prohibition of telephone companies carrying their own video programming, filed May 16, 1994.

Affidavit before the U.S. District Court for the District of Columbia on behalf of Southwestern Bell in support of request for out-of-region waiver from the interLATA MFJ restrictions (with William E. Taylor), filed May 12, 1994.

Reply Affidavit before the U.S. District Court for the District of Maine on behalf of NYNEX Corporation on overturning the statutory prohibition of telephone companies carrying their own video programming, filed May 6, 1994.

Testimony on behalf of Bell Atlantic-New Jersey in proceeding involving the issue of opening the intraLATA toll market to competition, filed April 7, 1994; Rebuttal Testimony filed April 25, 1994.

Testimony on behalf of Massachusetts Electric Company before the Federal Energy Commission on wholesale wheeling and the problem of stranded investment. FERC Docket No. ER94-129-000, filed March 14, 1994.

Testimony on behalf of The Chesapeake and Potomac Telephone Company of Maryland, Case No. 8584, on the regulatory principles applicable to determining an efficient price for MFS-1's interconnection with C&P's network (with William E. Taylor), filed November 19, 1993; Rebuttal Testimony filed January 10, 1994; Surrebuttal Testimony filed January 24, 1994.

Affidavit to the Federal Communications Commission with respect to Interstate Long Distance Competition and AT&T's Motion for Reclassification as a Nondominant Carrier (with William E. Taylor), filed November 12, 1993.

Affidavit to the High Court of New Zealand on behalf of New Zealand Rail Limited involving wharfage charges by Port Marlborough, September 27, 1993.

Testimony before the Federal Energy Regulatory Commission On Behalf of a Group of Independent Refiner/Shippers on the proposed Revision to Oil Pipeline Regulations under the Energy Policy Act of 1992, Docket No. RM93-11-000, August 12, 1993.

Affidavit to the High Court of New Zealand on behalf of Air New Zealand, Ltd., and others in a proceeding involving landing charges by Wellington International Airport, Ltd., June 25, 1993.

Affidavit before the U.S. District Court for the Eastern District of Virginia in the matter of *The Chesapeake and Potomac Telephone Company of Virginia v. United States of America*, Civil Action No. 92-1751-A, June 5, 1993 and before the Federal Communications Commission *In the Matter of Amendments of Parts 32, 36, 61, 64 and 69 of the Commission's Rules to Establish and Implement Regulatory Procedures for Video Dial Tone Service*, Petition for Rulemaking RM 8221, June 7, 1993.

Testimony before Denver County District Court, Denver, Colorado, on behalf of Metropolitan Denver Water Authority re City of Denver water rates, May 17, 1993.

"Review of Regulatory Framework: Telecom Public Notice CRTC 92-78," on behalf of AGT (Alberta Government Telephone Company). Alberta Canada, April 13, 1993.

"Major Elements of a Competitive Telecommunications Policy," on behalf of AGT (Alberta Government Telephone Company), Alberta, Canada, February 15, 1993

Testimony on behalf of the Municipal Electric Association evaluating the soundness of Ontario Hydro's Demand Side Management program, December 1992.

Affidavit before the Federal Communications Commission In the Matter of Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, ET Docket No. 92-100, November 6, 1992.

Testimony on behalf of New Zealand Telecom in an antitrust proceeding before the High Court of New Zealand involving terms of interconnection with Clear, a competitive provider of local transport, April 27, 1992.

Testimony on behalf of AMR Corporation and American Airlines, Inc., against UAL Corporation, United Airlines, Inc., UAL Acquisition, Inc., Air Wis Services, Inc., and Air Wisconsin, Inc., 91 CIV. 7773 (KMW), analyzing United Airlines' acquisition of Air Wisconsin's 50 O'Hare jet slots, March 2, 1991. Supplemental and Second Supplemental Testimonies, March 10 and 15, 1992.

Testimony before the Illinois Commerce Commission on behalf of Illinois Power Company, Docket No. P91-0001, on certification of a competing natural gas pipeline, February 24, 1992.

Rebuttal Testimony before the Florida Public Service Commission, Tampa Electric Co. Docket No. 910883E1, on electric utility company responsibilities for demand side management, November 20, 1991.

Affidavit before the Federal Communications Commission In the Matter of Expanded Interconnection Between Local Telephone Facilities, CC Docket No. 91-141 ENF-87-14, August 5, 1991.

Statement on behalf of United Kingdom of Great Britain and Northern Ireland in US/UK Arbitration Concerning Heathrow Airport User Charges, April 1991. Rebuttal and Surrebuttal Statements, June and July 1991; testimony before the International Court, The Hague, July 1991.

"The Treatment of New Services Under Price Cap Regulation," on behalf of BellSouth. Federal Communications Commission, June 10, 1991.

Testimony on behalf of Fireman's Fund Insurance Company before the Insurance Commissioner of the State of California re proposed action to repeal and adopt regulations concerning property and casualty insurance rates, February 20, 1991.

Testimony before the Federal Energy Regulatory Commission on behalf of Conoco, Inc. Kaneb Pipeline Operating Partnership, L.P., and Kerr-McGee Refining Corporation (Williams Pipeline), February 4, 1991.

Affidavit to the U.S. District Court for District of Columbia on behalf of Bell Atlantic Corporation in *United States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, re MFJ restrictions on Bell Operating Companies' ability to offer information services, January 8, 1991.

Oral testimony before the Puerto Rican Legislature on privatization and future regulation of the Puerto Rico Telephone Company, June 20, 1990.

Testimony on behalf of Central Telephone Company of Florida before the Public Service Commission, June 12, 1990.

Testimony on behalf of Fireman's Fund Insurance Company on Proposition 103 Rate Regulation Hearings, February 5, 1990.

Testimony before Denver County District Court, Denver, Colorado, on behalf of Southgate Water District vs. Denver Water Authority on conduit extension charges, May 25, 1989.

"Efficient Pricing of Congested Airport Facilities." A Report to the Department of Transport, Great Britain, April 1989.

Testimony on behalf of ETSI Pipeline Project v. Burlington Northern Inc., et al, in the United States District Court for the Eastern District of Texas, Beaumont Division, Civil Action No. B-84-979-CA, February 23, 1989.

Reply Verified Statement on behalf of Concerned Shippers. In the Matter of Railroad Cost Recovery Procedures—Productivity Adjustment: Ex Parte No. 290 (Sub-No. 4), January 17, 1989.

Testimony on behalf of California Coalition for Trucking Deregulation before the Public Utilities Commission of the State of California. In the Matter of the Regulation of General Freight Transportation by Truck, Case No. I-88-08-046, October 27, 1988.

Testimony before the Public Service Commission of the State of New York on the application to construct the Empire State gas pipeline, Case No. 88-T-132, October 1988.

Testimony before the Federal Communications Commission on behalf of Bell South on adjustment factor for local exchange companies under rate cap regulation. In the Matter of Policy and Rules Concerning Rates for Dominant Carriers (CC Docket 87-313), July 1988.

Affidavit on behalf of Massachusetts Port Authority in a proceeding on the proposed structure of landing fees for Logan Airport, Boston, U.S. District Court, District of Massachusetts, June 1988.

Affidavit on behalf of Financial Interchange Inc. in an antitrust arbitration proceeding on the legality of jointly set interchange fees of an electronic funds transfer network, April 1988.

Verified Statement before the Interstate Commerce Commission in Coal Trading Corporation, et al. v. Baltimore & Ohio Railroad Company, et al. (Docket No. 38301S) on the computation of rail stand-alone costs, April 1988.

Testimony on behalf of Public Service Electric & Gas Company, New Jersey on the used and useful doctrine in the context of utility performance standards, April 1988.

Testimony on behalf of the U.S. Postal Service on the pricing of Express Mail, March 28, 1988.

Testimony on behalf of Kentucky Industrial Utility Customers Case No. 9934 on the criteria for deciding whether a nuclear plant should be completed, February 8, 1988.

Testimony and Rebuttal Testimony before the Iowa State Utilities Board Department of Commerce on behalf of Northwestern Bell on the regulatory treatment of depreciation reserve deficiencies. October 1987 and November 1987.

Testimony before the State of Connecticut Department of Public Utility Control on behalf of the Connecticut Cable Television Association on regulating cable television rates, November 13, 1987.

Testimony before the Federal Communications Commission on behalf of Bell South In the Matter of Policy and Rules Concerning Rates for Dominant Carriers (CC Docket 87-313) October 1987 and Reply Testimony, November 1987.

Reply Verified Statement before the Interstate Commerce Commission on behalf of McCarty Farms et. al. and Montana Department of Commerce, on the stand-alone cost constraint on railroad rates to captive shippers, October 2, 1987.

Testimony before the New York State Public Service Commission on behalf of New York Telephone Company on assessing the competitiveness of telecommunications markets, April 1987.

Testimony before the New Jersey Senate Energy and Environment Committee on behalf of Public Service Electric and Gas Company on draft bill, No. 2801, the "Electricity Market Pricing Act of 1986," January 26, 1987.

Testimony before Federal Energy Regulatory Commission on behalf of Interstate Natural Gas Association of America on "Competitive Implications of Natural Gas Pipeline Marketing Affiliates." December 29, 1986.

Testimony before the New York State Public Service Commission on behalf of the Owners Committee on Electric Rates, Inc., on rent-inclusion and submetering, November 19, 1986.

Testimony before the Illinois Commerce Commission on behalf of Commonwealth Edison Company on standard for deciding whether Braidwood Unit 2 should be cancelled, August 4, 1986.

Verified Statement on Standards for Railroad Revenue Adequacy, on Interstate Commerce Commission's Ex Parte No. 393, Sub-No.1, July 1986.

Supplemental Verified Statement before the Interstate Commerce Commission, Docket No. 38783. Omaha Public Power District v. Burlington Northern Railroad Company on behalf of Omaha Public Power District, April 1986.

Statement to Federal Communications Commission on New England Telephone Company's Proposed Interstate Access Tariff Restructure, January 30, 1986.

Testimony before the Public Utilities Commission of the State of Oregon on inverted rate structures on behalf of the Pacific Power & Light company, January 1986.

Rebuttal Testimony before the California Public Utilities Commission on San Onofre nuclear plants on behalf of Southern California Edison Company, January 1986 and En Banc Proceeding, February 1986.

Testimony and rebuttal testimony before the Arizona Corporation Commission on behalf of Arizona Public Service Company on economic and regulatory principles applicable to entry of nuclear plants into rate base, December 1985, March 1986, December 1986 and March 1987.

Testimony before the Corporation Commission of the State of Oklahoma on economic principles applicable to access charges, Cause No. 29321 on behalf of Southwestern Bell Telephone Company, September 1985.

Testimony before the California Public Utilities Commission on regulatory principles applicable to prudence determinations on behalf of Southern California Edison Company, August 1985.

Testimony before the Corporation Commission of the State of Oklahoma on development of intrastate access charges, Cause No. 28309 on behalf of Southwestern Bell Telephone Company, May 1985.

Verified Statement before the Interstate Commerce Commission, Docket No. 38783 on behalf of Omaha Public Power District, on the grouping of captive shippers for purposes of applying a standalone cost test of contested rail rates, November 1984.

Testimony before the House Public Policy and Veterans Affairs Committee of the Indiana General Assembly on behalf of the Indiana Telephone Association, October 25, 1984.

Testimony before the Iowa State Commerce Commission, Docket No. INU-84-6, Investigation into competition in communications services and facilities, October 18, 1984.

Testimony and rebuttal testimony on current cash support for construction and the reorientation of regulatory policy before the Maine Public Utilities Commission, in the matter of Central Maine Power Company's proposed increase in rates, Docket No. 84-120, August 1984 and February 1985.

Testimony and rebuttal testimony for Illinois Power Company on rate base treatment of construction work in progress, before Illinois Commerce Commission. Docket No. 84-0480, August 1984 and April 1985.

Verified Statement before the Interstate Commerce Commission. Docket No. 39687, on behalf of Platte River Power Authority, on the proper definition of the cost of capital for purposes of applying a stand-alone cost test of contested rail rates, July 1984.

Verified Statement and Surrebuttal Verified Statement Before the Interstate Commerce Commission, Finance Docket No. 30300 on behalf of the Water Transport Association, in opposition to the application of CSX Corporation to acquire American Commercial Barge Lines. Inc., February 14, 1984 and April 19, 1984.

Direct and rebuttal testimony, Federal Energy Regulatory Commission, Trans Alaska Pipeline System, on behalf of the State of Alaska, Dockets Nos. OR 78-1-014 and OR 78-1-016 (Phase I Remand) November 1, 1983 and December 23, 1983.

Verified Statement. Interstate Commerce Commission, on the stand alone test for rail rates to captive shippers, on behalf of Utility Fuels, Inc., Docket No. 39002, October 3, 1983.

Testimony on telephone rate structures before the Colorado Public Utilities Commission for Mountain States Telephone & Telegraph Company, May 27, 1983; the California Public Utilities Commission, for Pacific Telephone & Telegraph Company, August 18, 1983; the Missouri Public

Service Commission, September 8, 1983; and Texas Public Service Commission, September 19, 1983, for Southwestern Bell Company.

Testimony before the Utility Diversification Committee of the Legislature of the State of New Mexico, September 2, 1982.

Testimony before the Ad Hoc Committee on Utility Diversification, National Association of Regulatory Utility Commissioners, May 6, 1982.

Testimony before Motor Carrier Ratemaking Study Commission. Orlando, Florida, April 2, 1982.

Testimony before the State of Connecticut Department of Public Utility Control on methods of regulating rates for basic television cable service, March 9, 1982.

Testimony before the Committee of Energy and Public Utilities, The General Assembly of the State of Connecticut on regulation of cable television, March 1, 1982.

Testimony before the Public Utilities Commission of the State of California, for Pacific Power & Light Company on methods of allocating aggregate revenue requirements, September 24, 1981.

Verified Statement, Interstate Commerce Commission, Ex Parte No. 347 (Sub-No. 1), "Coal Rate Guidelines-Nationwide," September 1981.

Testimony for the Department of Justice in the U.S. v. Standard Oil Co. (Indiana) et al. Civil Suit 40212, filed July 28, 1964.

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